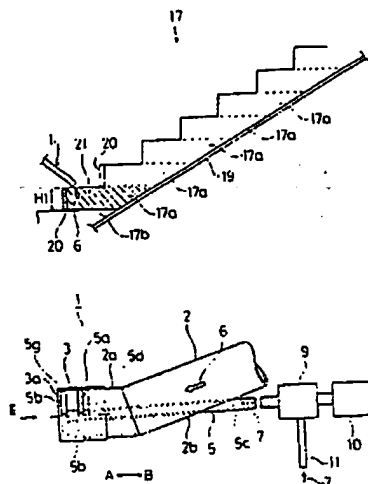


- (54) **RAPID CONSTRUCTION OF STAIRCASE**  
 (11) 1-178656 (A) (43) 14.7.1989 (19) JP  
 (21) Appl. No. 62-336578 (22) 29.12.1987  
 (71) MITSUI CONSTR CO LTD (72) ICHIRO YAMAMOTO(2)  
 (51) Int. Cl. E04F11/02, E04G21/02

**PURPOSE:** To enable rapid stair construction work, by pouring concrete/mortar containing a quick setting agent into a concrete placing position whereby the placed concrete/mortar is rapidly solidified.

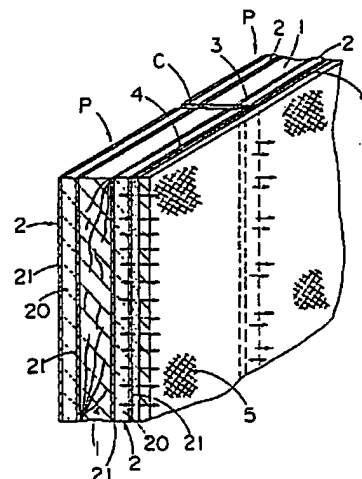
**CONSTITUTION:** A concrete placing hose 1 is connected to a transmitting conduit 2 which is in turn connected to a pressure-feeding means such as pumps, and is provided with a tip end cover 3 for a hollow rotating shaft 5 and stirring wings 5a, 5g. Inlets 5c, 5d for a quick setting agent is also formed on the hollow shaft 5 which is rotatably driven by a driven motor 10. With the drive motor operated, the hollow shaft is rotated together with the stirring wings 5a, 5g inside of the top end cover 3 to thereby evenly stir and admix concrete/mortar 6 fed under pressure with the quick setting agent added through an inlet therefor. The mixture is then poured through an outlet 3a into an intended concrete placing position 21. As a result, a staircase 17 can be constructed in a short time.



- (54) **WALL STRUCTURE**  
 (11) 1-178657 (A) (43) 14.7.1989 (19) JP  
 (21) Appl. No. 63-2723 (22) 9.1.1988  
 (71) NATL HOUSE IND CO LTD(2) (72) TETSUO YASUDA(2)  
 (51) Int. Cl. E04F13/04

**PURPOSE:** To apply a mildewproofing effect on all the inside of a wall structure, by clogging a gap formed between inner-lining layers of the adjacent wall panel units with putty containing a mildewproofing agent, and attaching a face panel onto the inner-lining layer through an adhesive layer containing a mildewproofing agent.

**CONSTITUTION:** A plaster board as an inner-lining layer 2 is attached to both sides of a structural base member 1 made of wood and the like and having a frame structure in order to construct a wall panel P. A plastic putty material 3, which contains a mildewproofing agent and ethylene/vinyl acetate resins, is applied from the interior side into a gap C formed between the inner-lining layers of the adjacent wall panels, to thereby clog the gap. The inner-lining layer 2 is coated with an adhesive 4 of the same material as the putty 3 containing a mildewproofing agent and ethylene/vinyl acetate resin and the like. Then, on the inner-lining layer is attached a front panel 5. This construction completely prevents mildew from entering the inside of the wall structure from the front panel 5.



- (54) **DECORATIVE WALL PANEL**  
 (11) 1-178658 (A) (43) 14.7.1989 (19) JP  
 (21) Appl. No. 63-2767 (22) 10.1.1988  
 (71) MIKIO YOSHIMATSU (72) MIKIO YOSHIMATSU  
 (51) Int. Cl. E04F13/08, E04F13/14

**PURPOSE:** To facilitate simplified wall construction work, by providing on a base panel, a plurality of pairs of supporting rails disposed in parallel with each other and spaced apart at an identical distance, and suspending a decorative panel having grooves on the rear, on the base panel, by means of a fastening clip having legs insertable into the grooves and hooks engaging with the supporting rails.

**CONSTITUTION:** A base panel 1 is provided with a plurality of pairs of supporting rails 2 which may be integrally formed therewith by extrusion of a sheet metal and are disposed in equally spaced and parallel relation with each other. Each supporting rail 2 is projected outwardly from and perpendicularly to the body of the base panel 1. At the free end of the supporting rail 2, there are formed flange parts 4 projecting upwardly from the end and horizontal spaced apart at a given distance. A pair of the supporting rails 2, which serve as an independent unit, are so disposed as to be directly secured onto the intended decorative area of the base panel to which a decorative panel 7 is to be attached. The decorative panel 7 has, on the rear, fitting grooves 8 into which legs of a fastening clip are insertable. On the opposite side of the fastening clip 9 is provided hooks engageable with the supporting rail 2. Therefore, the decorative panel 7 can be suspended on an optional position of the base panel by means of the fastening clip 9. This enables to alter a decorative pattern on the wall without requiring expensive work.

